

Americium Recovery Facility (The “McCluskey Room”)

Presented to
**River and Plateau Committee
Hanford Advisory Board**

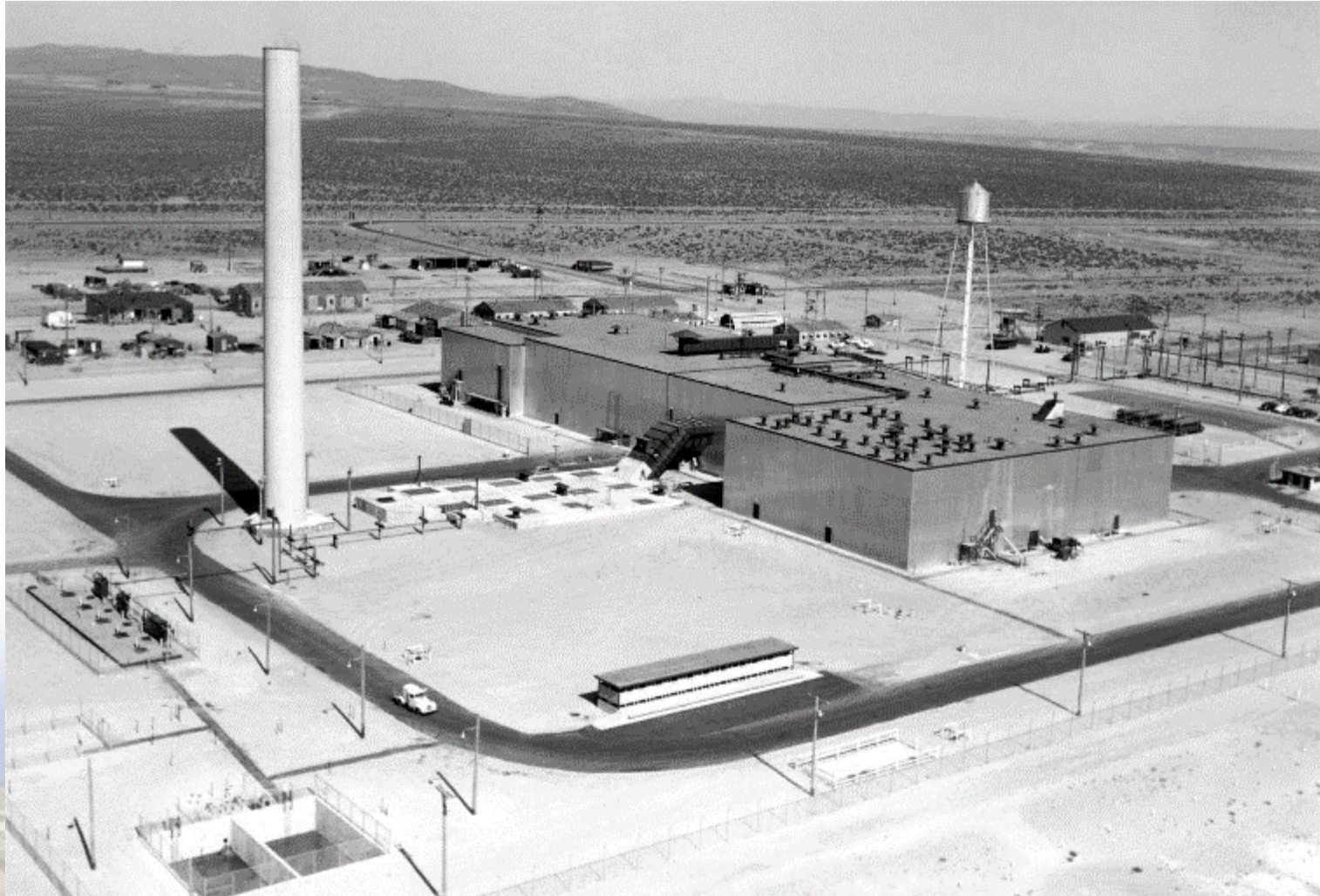
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*U.S Department of Energy
Richland Operations Office*



200 Area Central Plateau looking west (June 16, 2005)



Plutonium Finishing Plant (PFP) before construction of 242-Z Americium Recovery Facility (ARF); also known as “McCluskey Room” (June 1949)



PFP in 1964 after construction of 242-Z and 236-Z Plutonium Reclamation Facility (PRF)



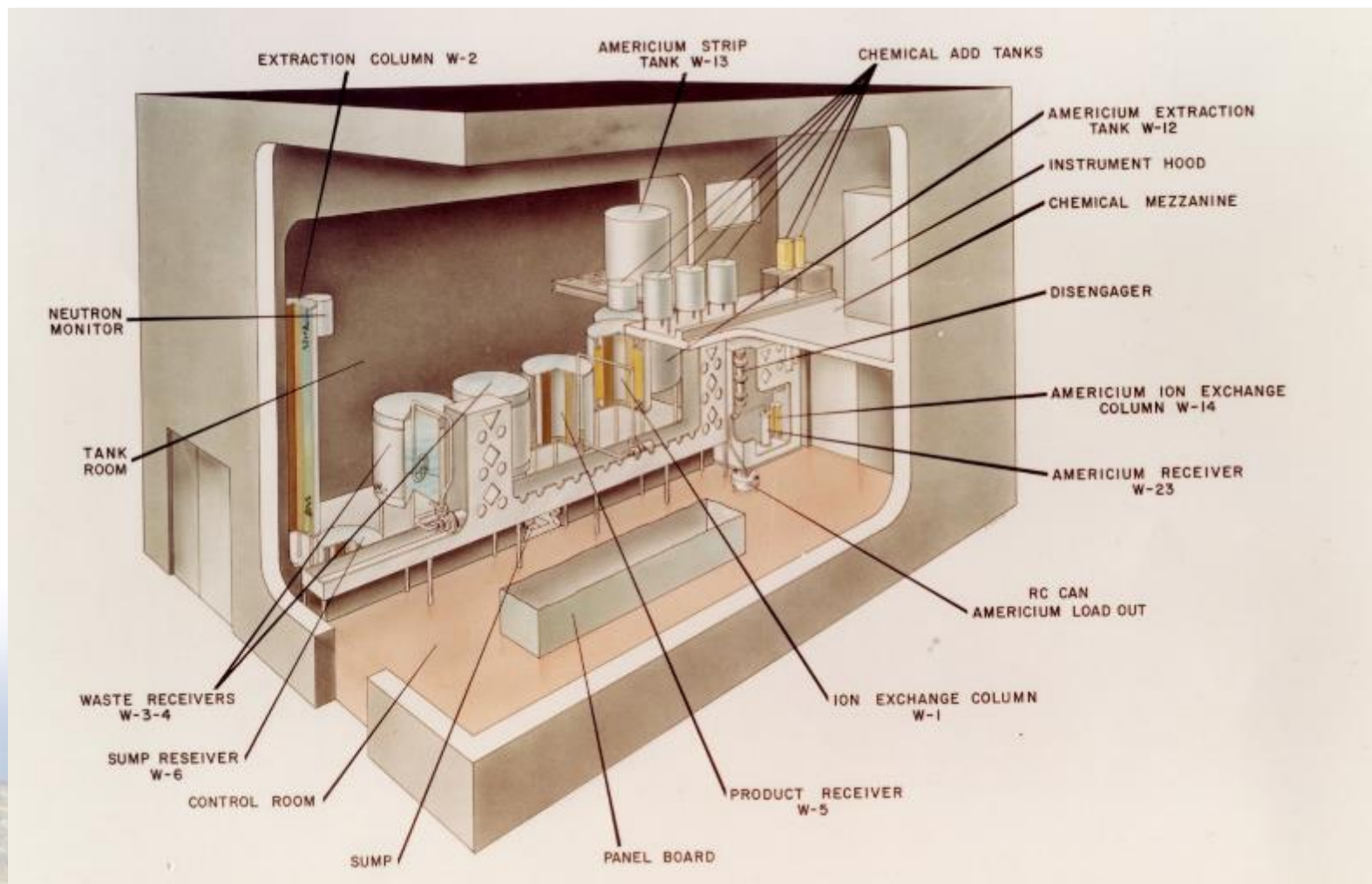
Aerial view of the PFP Complex (Oct. 30, 2014)



Aerial view of the PFP Complex (October 2013)



Waste Treatment and Americium Recovery Facility



East entrance to 242-Z Control Room (north wall of 236-Z on left)



West entrance to 242-Z (April 29, 2015)



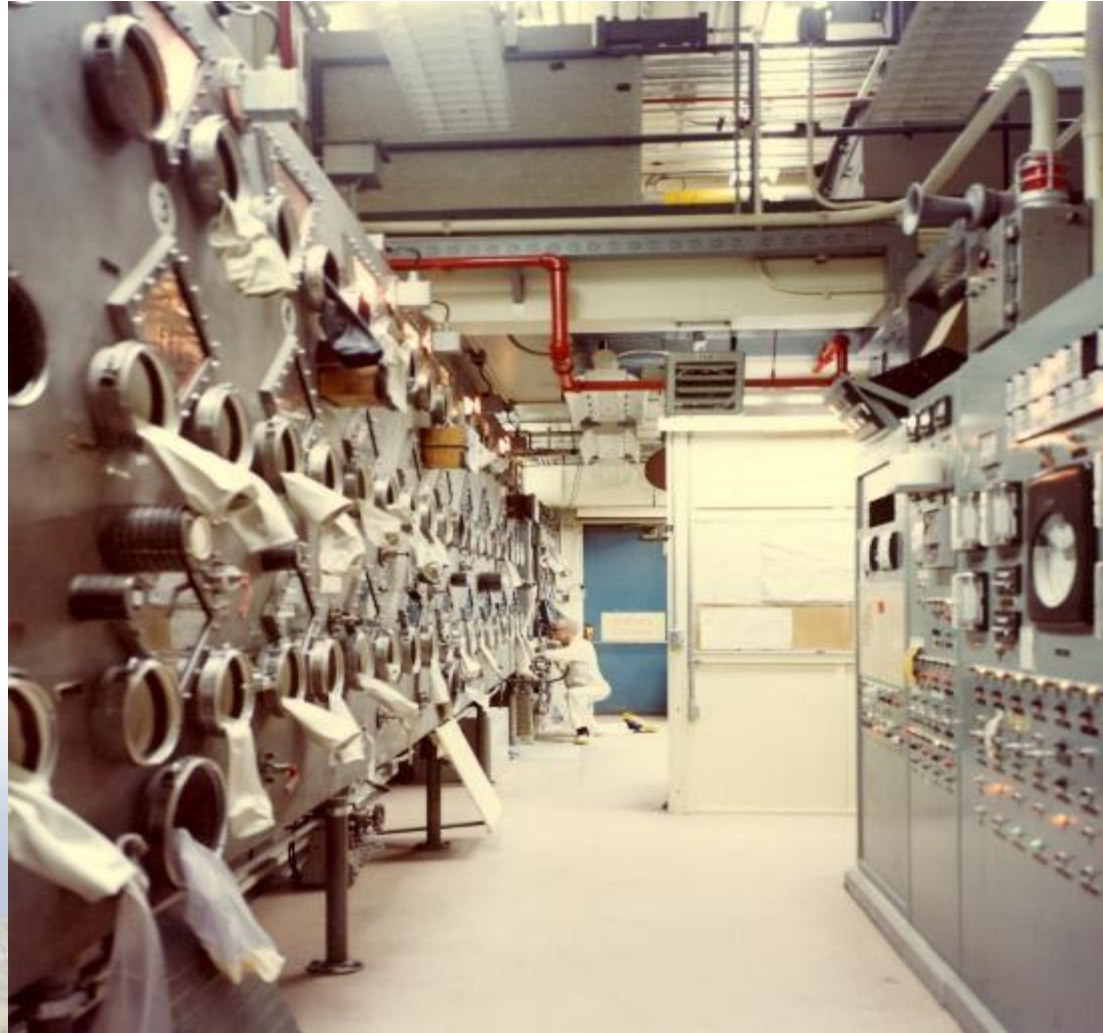
242-Z access (interior view looking southwest)



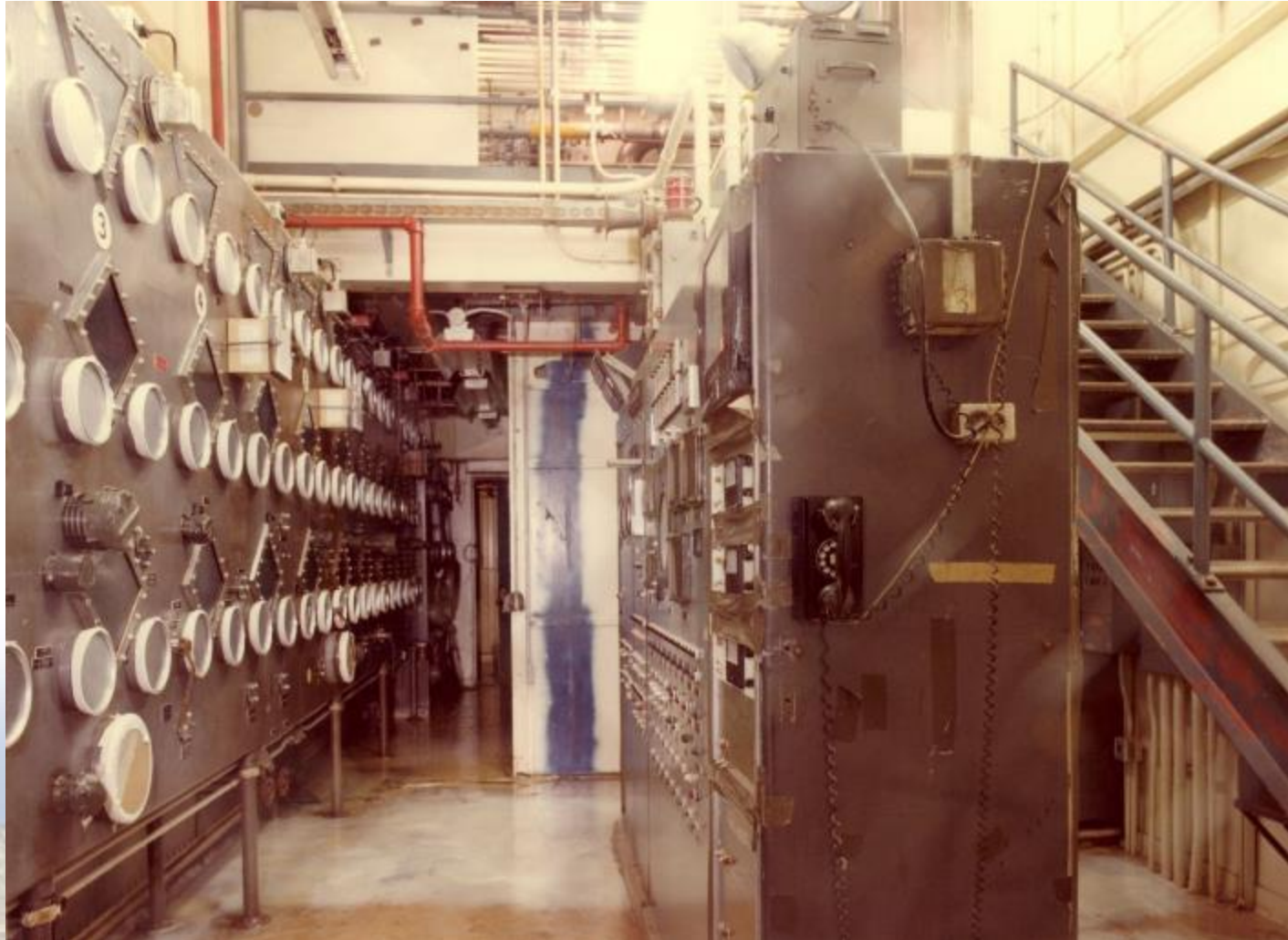
242-Z access / entrance (looking northeast)



Harold McCluskey working in WT-2 Glovebox ("in-the-gloves")



WT-1 and WT-2 Gloveboxes (“pie-plated”) 242-Z control panel



242-Z Control Room floor after exterior weather event (Aug. 14, 2014)



Historical: Worker in protective gear (circa 1970s)



Worker in 242-Z Control Room- PhramTex suit with supplied air (summer 2010)



Workers in protective gear (January 2015)



Worker in Rich Industries suit and PremAire regulator (January 2015)



242-Z field work team prior to an entry (March 2015)



Worker connecting to supplied air before entry into 242-Z



First entry into 242-Z Control Room (Sept. 8, 2014)



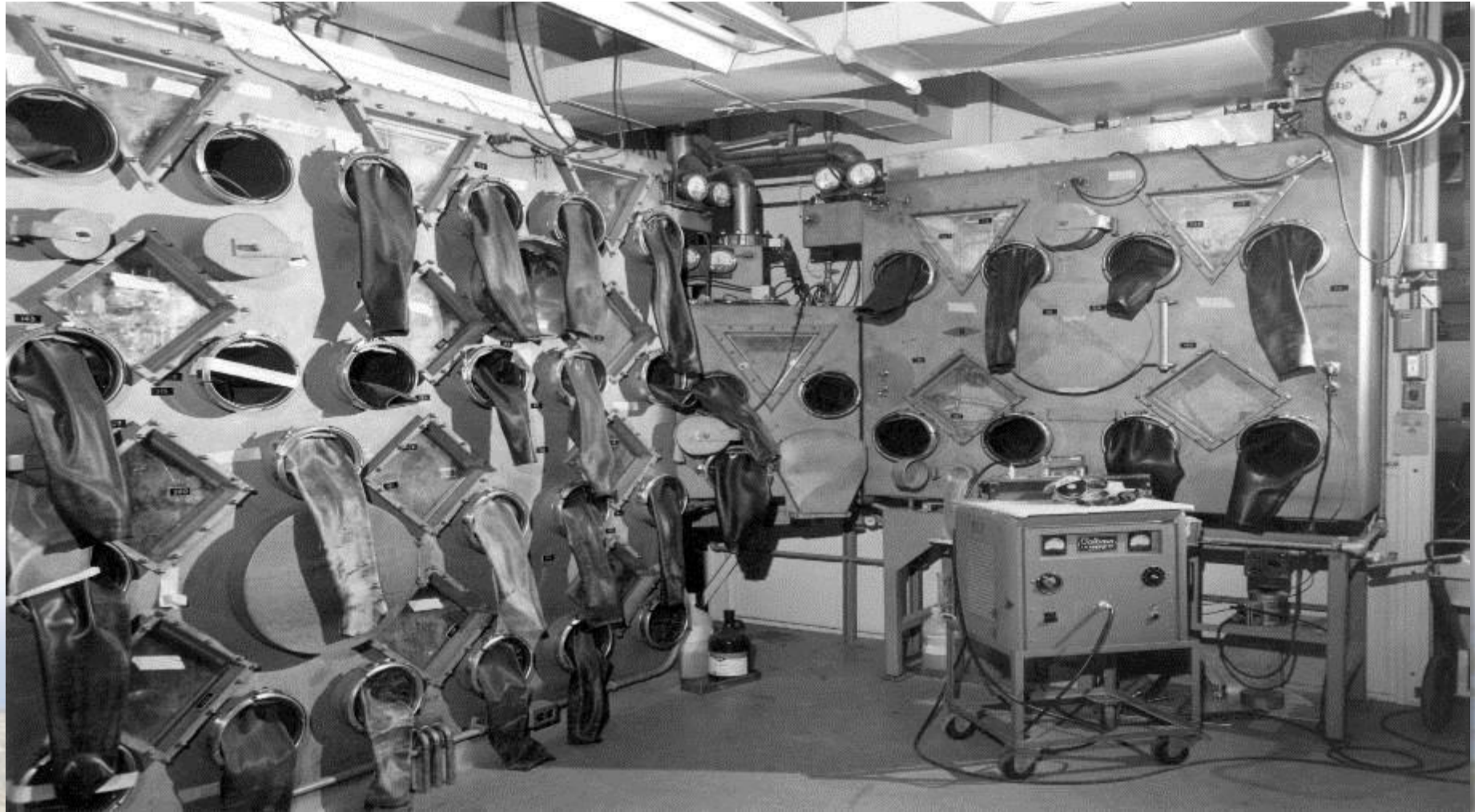
Worker in front of WT-3 Glovebox during entry (Sept. 8, 2014)



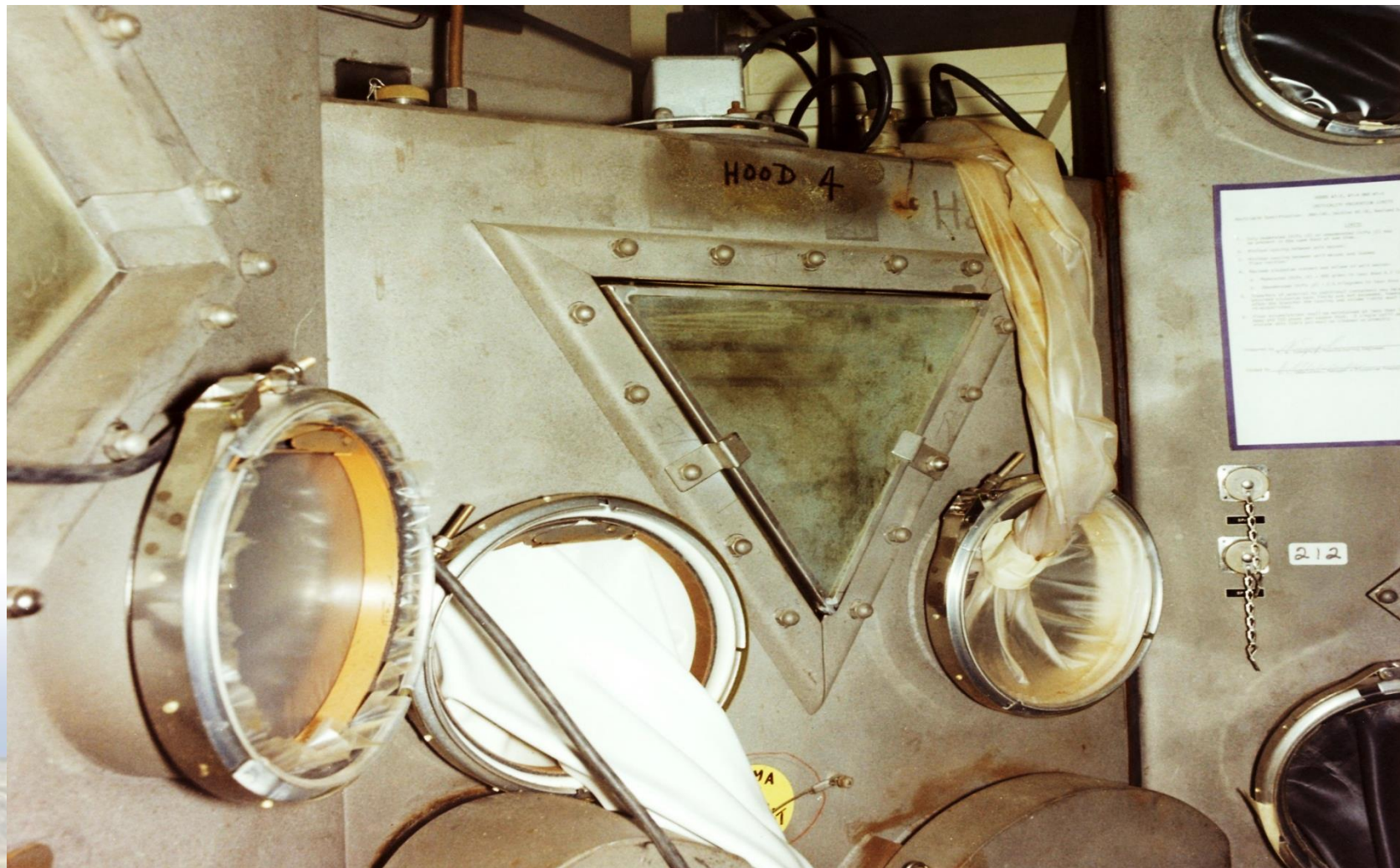
View of WT-2 Glovebox during entry (Sept. 8, 2014)



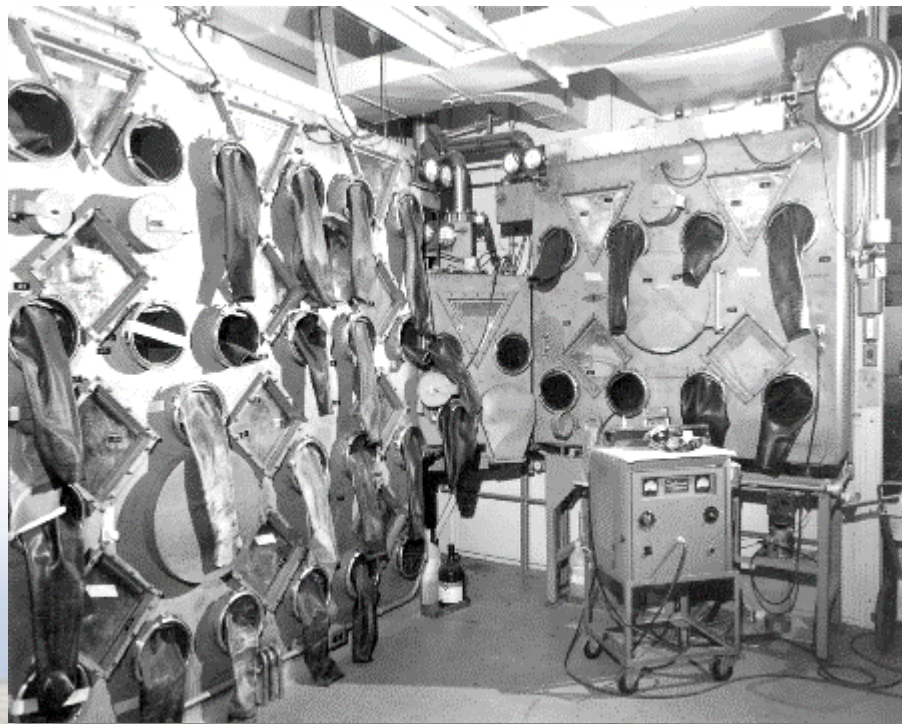
Historical: WT-3, WT-4 and WT-5 Gloveboxes in 242-Z Control Room (left to right)



WT-4 Glovebox in 242-Z Control Room (removed in 2010/2011)



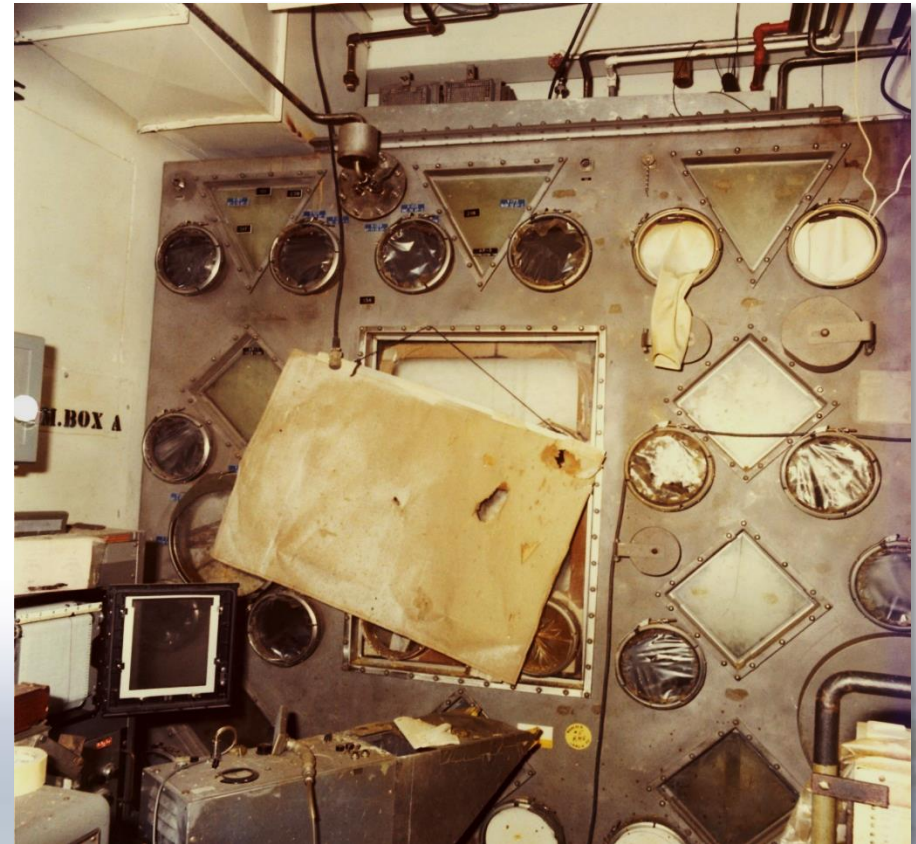
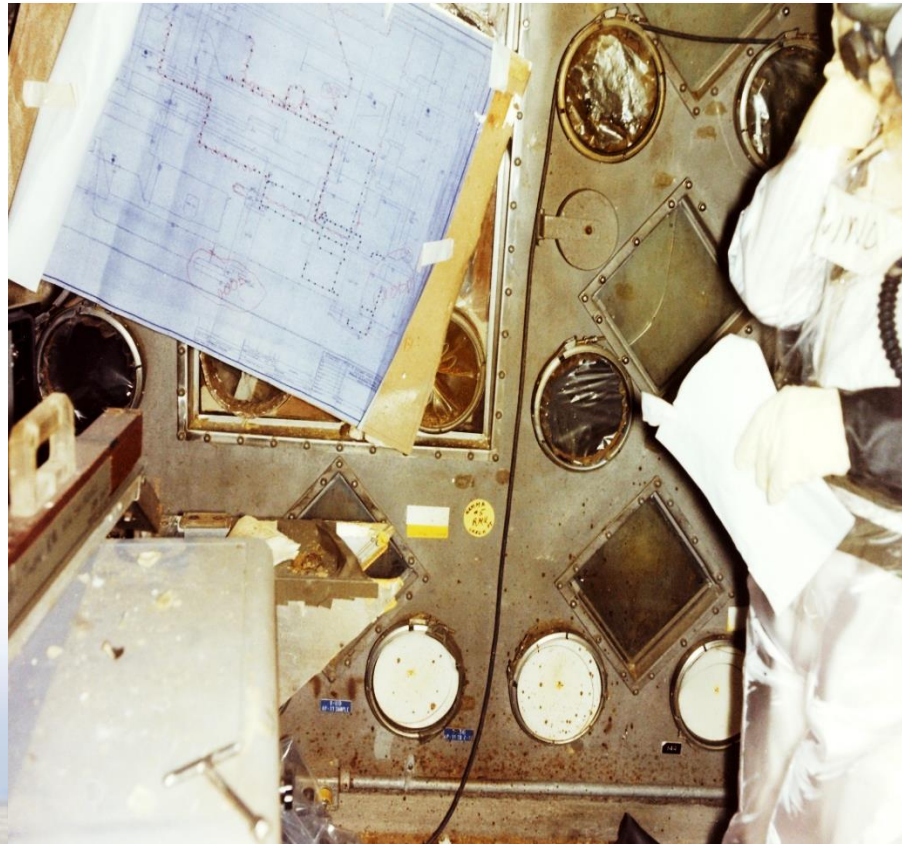
242-Z Control Room process gloveboxes during operations (left) and after clean-up (right)
Glovebox WT-3 (front left), WT-4 (back center) and WT-5 (back right) WT-3 prior to final removal (December 2014)



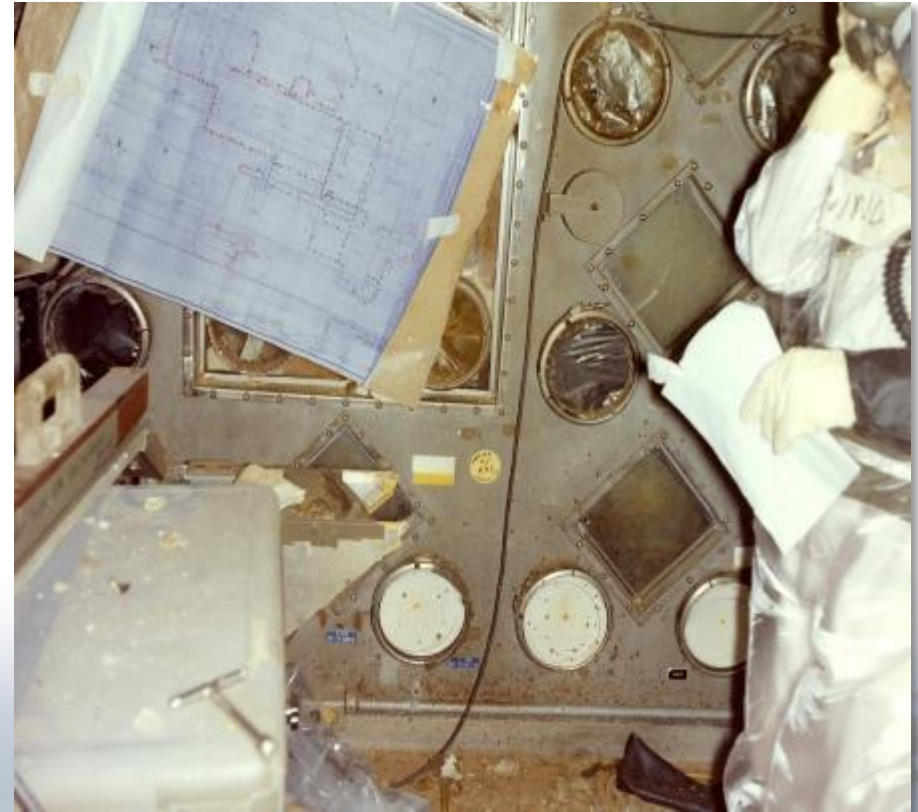
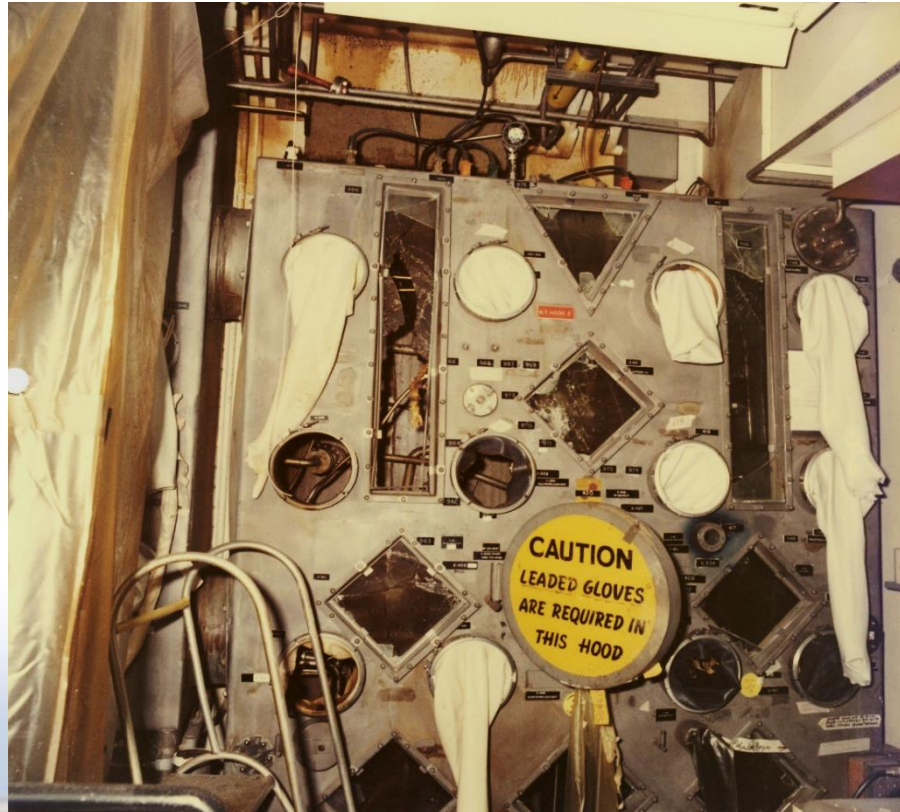
WT-2 Glovebox after explosive event (Sept. 30, 1976)



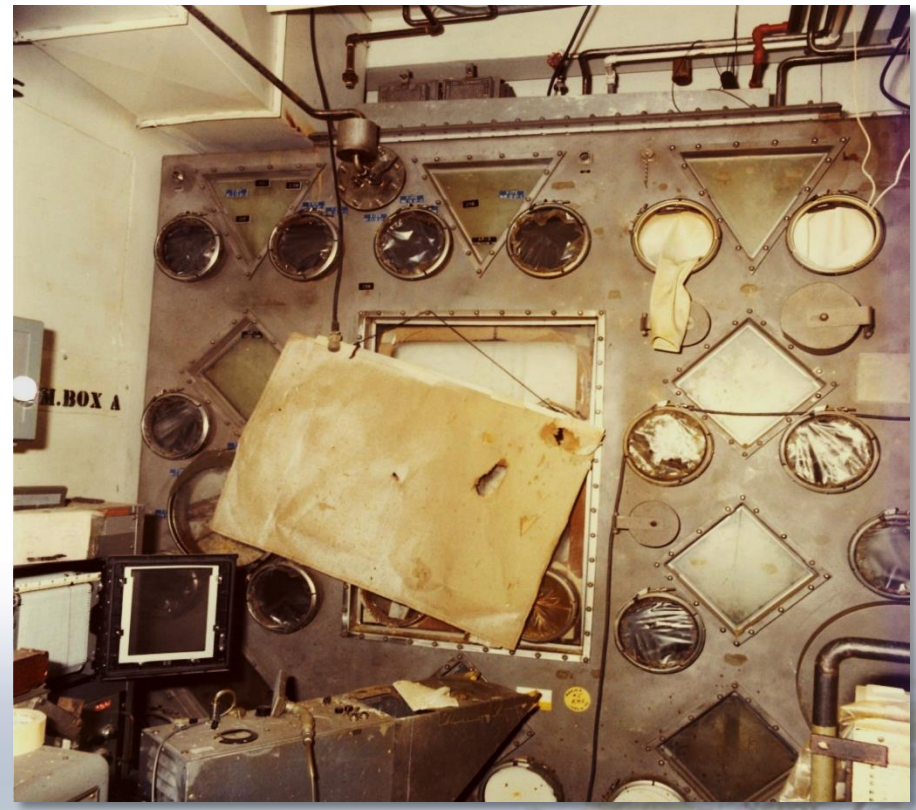
WT-2 Glovebox after explosive event (Sept. 30, 1976)



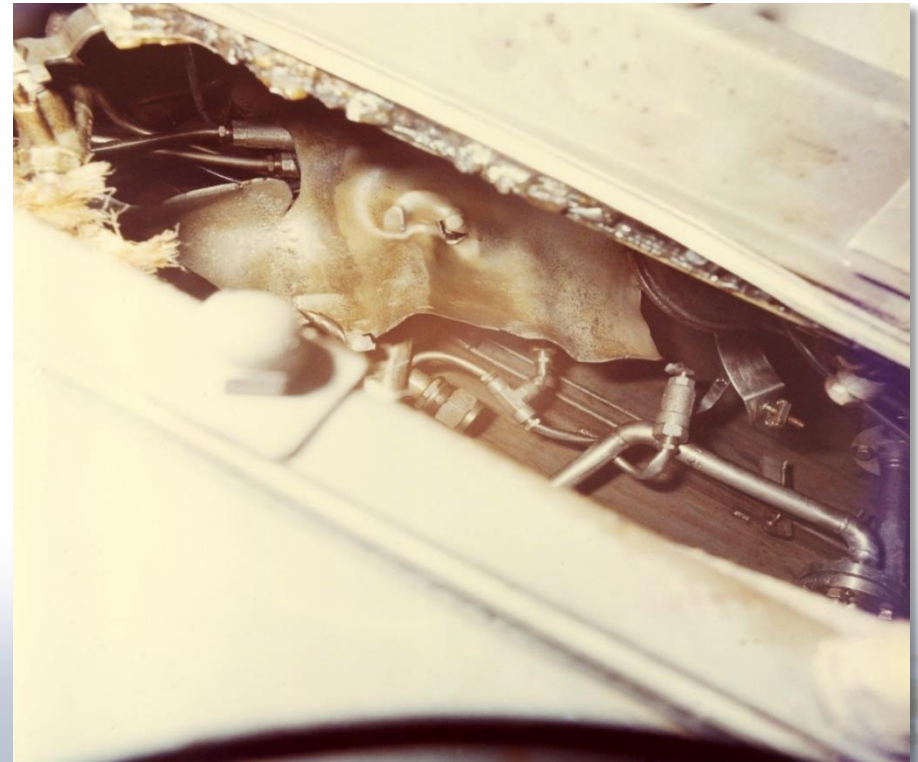
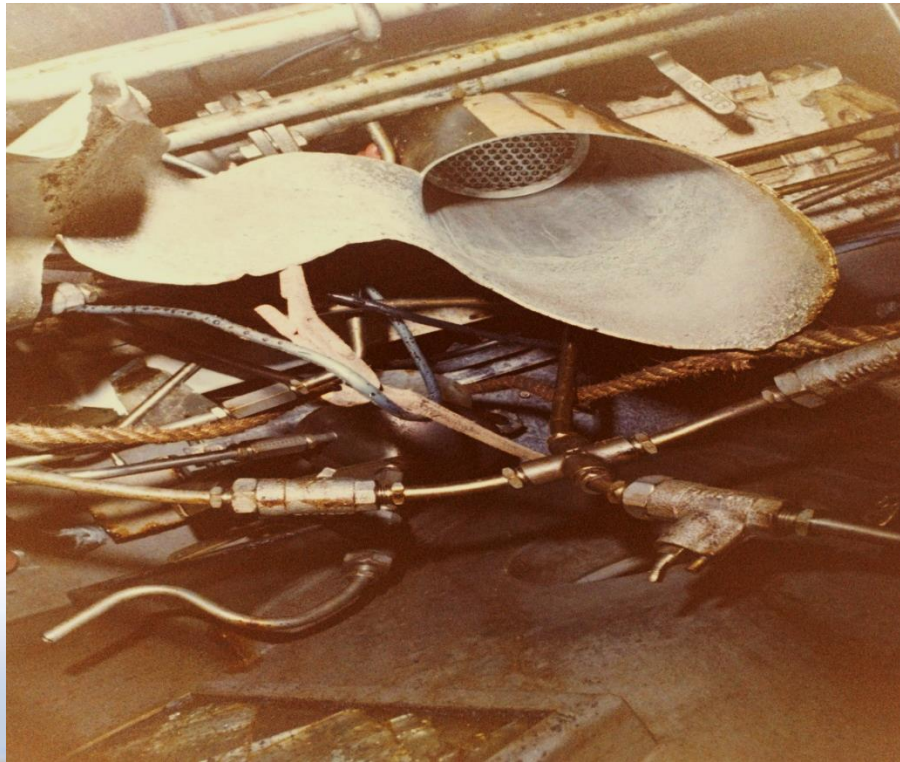
WT-2 Glovebox after explosive event (Aug. 30, 1976)



WT-2 Glovebox after explosive event (Aug. 30, 1976)



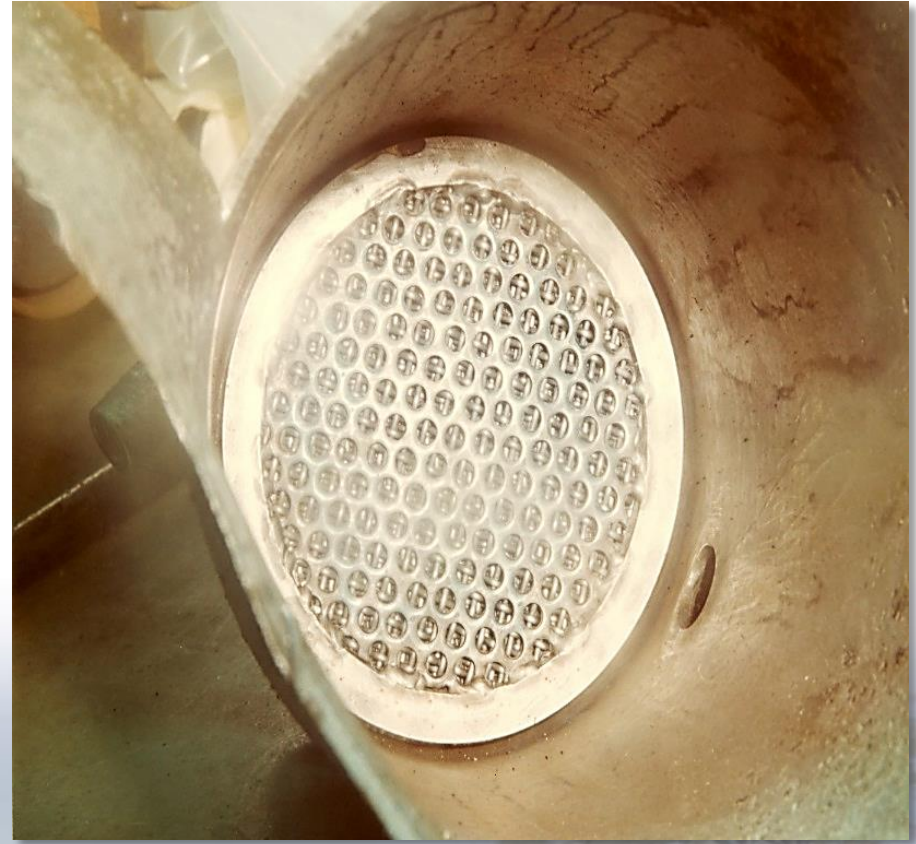
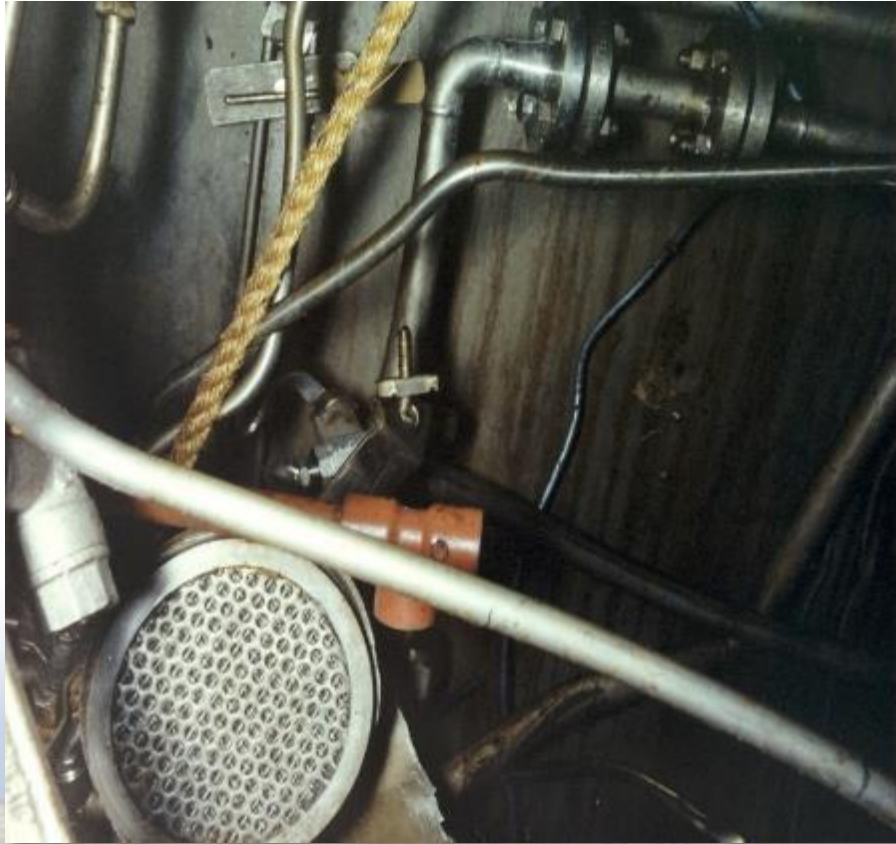
Tank W-14A after explosive event (Aug. 30, 1976)



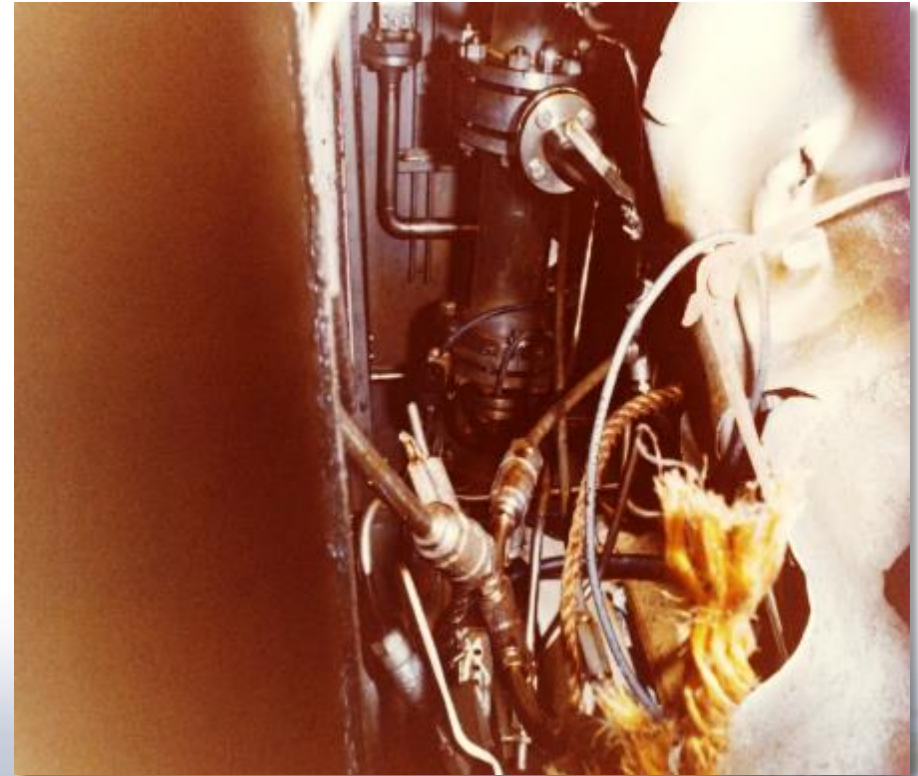
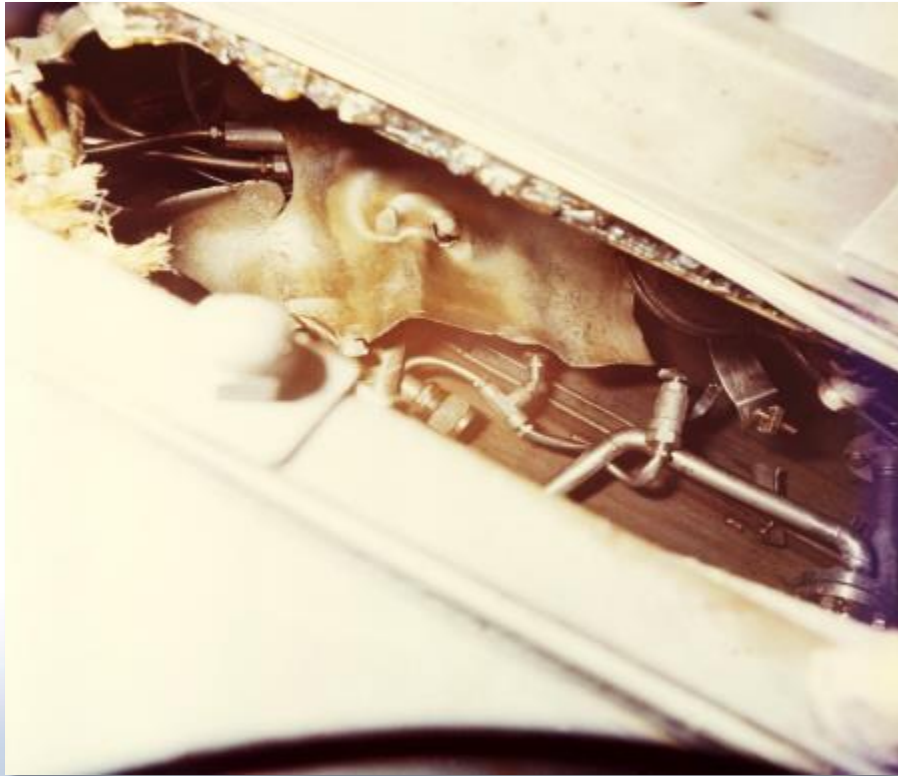
Interior of WT-2 Glovebox after explosive event



Tank W-14A ion exchange pre-filter (“biscuit”) after explosive event



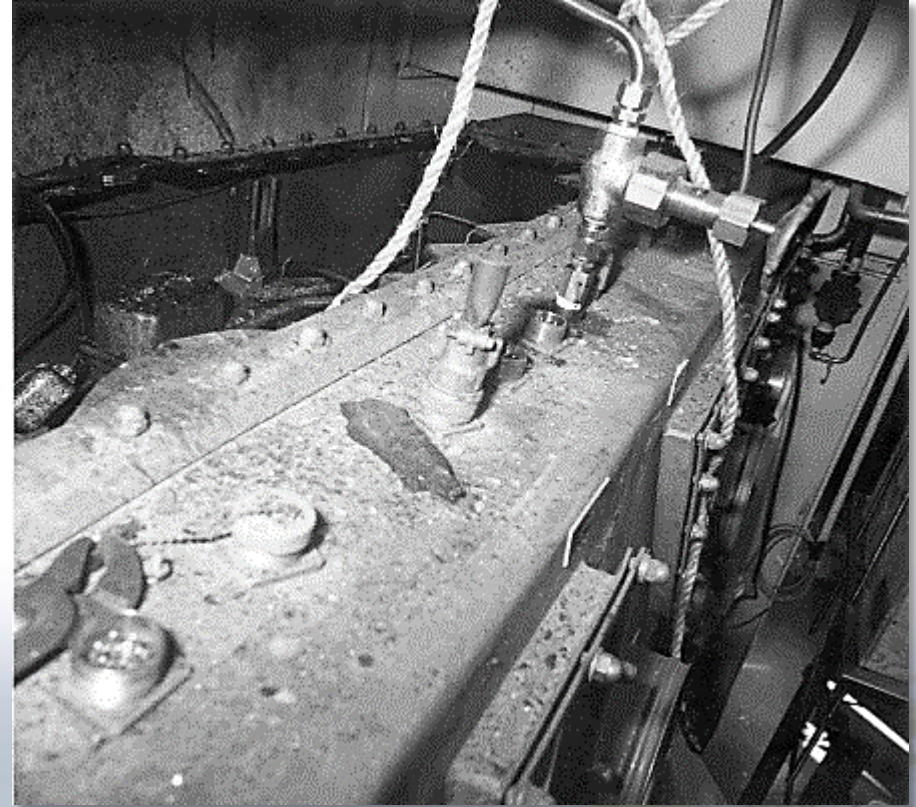
Interior of WT-2 Glovebox after explosive event



Process equipment in WT-2 Glovebox after explosive event



View of Tank W-14A, WT-2 Glovebox (top view)



Smoke testing to validate ventilation near WT-2 and WT-1 Gloveboxes



Smoke testing to validate ventilation flow on the Mezzanine Deck



WT-2 Glovebox – first look inside after partial removal of front face



WT-2 Glovebox – front face fully removed



WT-1 Glovebox with front face partially removed (April 2015)



Next steps beginning May 2015

- Complete removal of WT-1 Glovebox, including process piping and equipment, exterior shell and legs
- Drain and remove process and delivery lines in the Tank Room pipe gallery
- Remove and disposition selected, non-radiological hazardous waste items from Control Room and Mezzanine Deck
- Prepare tanks with fixative for removal during demolition
- Verify demolition readiness
- Demolish and disposition 242-Z waste in accordance with the demolition plan sequence

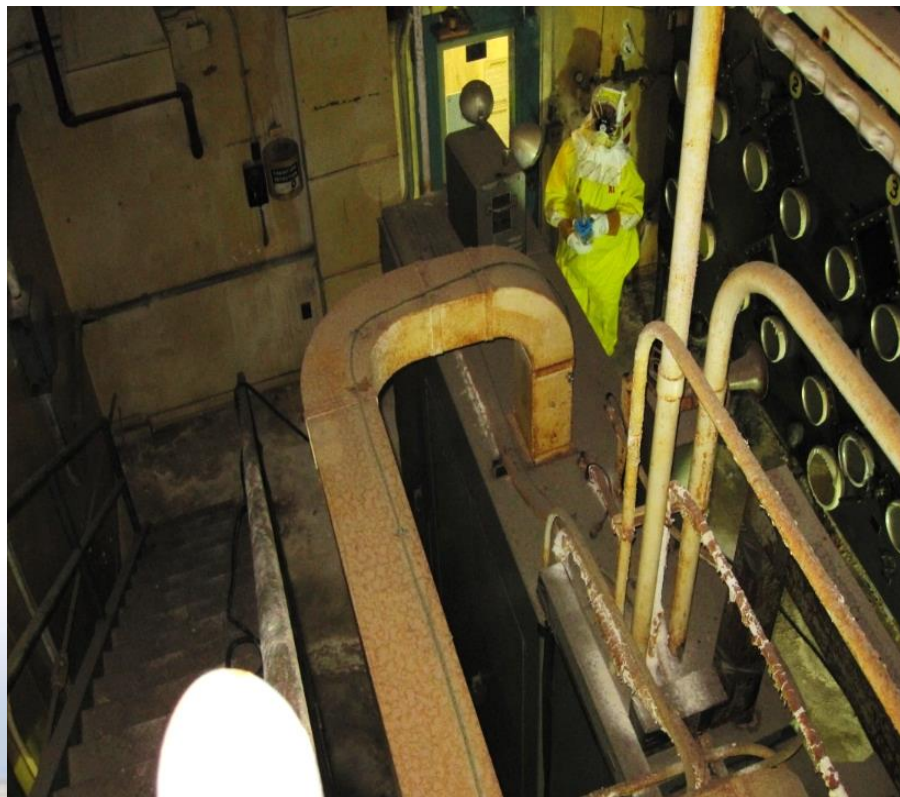
Small batch process tank in WT-1 Glovebox (Feb. 11, 2015)



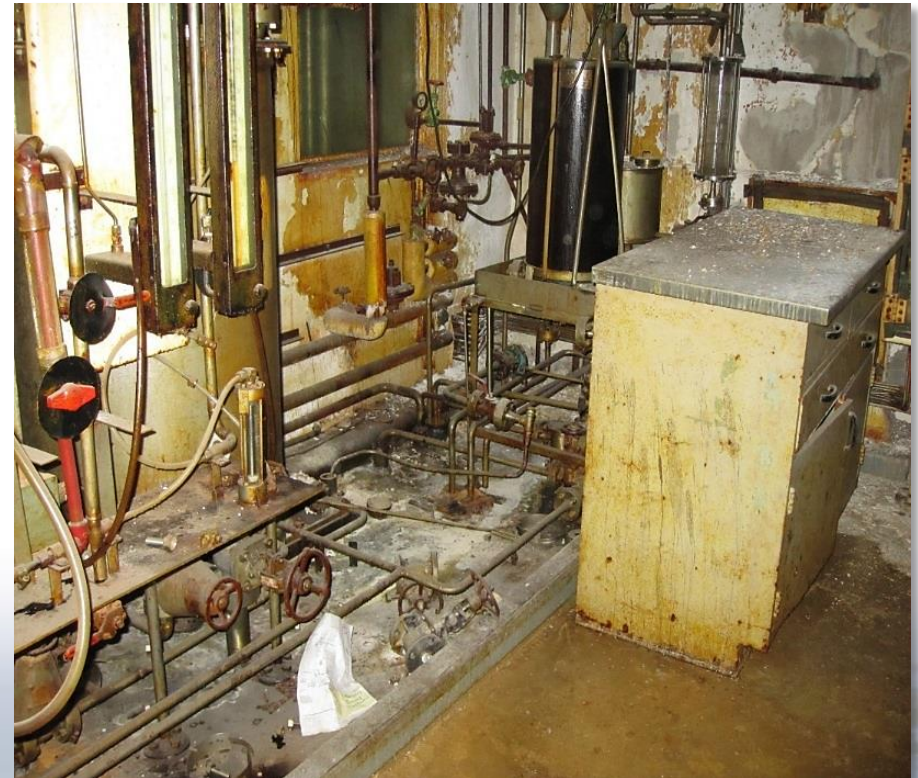
Legacy waste in the interior of WT-1 Glovebox



WT-1 Glovebox as viewed from Mezzanine Deck



Process area on 242-Z Mezzanine Deck



Process Control Valves on 242-Z Mezzanine Deck



Partial views of pipe gallery in 242-Z Tank Room



242-Z Tank Room before fixative application (1980s)



Hydrated butylated varnish (“butvar”) on Tank Room floor (1980s)



242-Z Tank Room after fixative application (January 2015)

